



Contractors State License Board

ASBESTOS: A Contractor's Guide and Open Book Examination

******IMPORTANT******

You **MUST** take the Open-Book Exam and **SIGN** the verification form. Submit completed verification form with your renewal or bond verification and license fee notice. If you do not submit this form, the Board **CANNOT** process your license.

Section 7058.5 of the Business and Professions Code states:

The Contractors State License Board shall develop and deliver to all applicants with the request for bond and fee, a booklet containing information relative to handling and disposal of asbestos, together with an open book examination concerning asbestos-related work. All applicants for an initial contractor's license and all applicants filing a delinquent renewal application who have not previously completed the open book examination shall complete and sign the open book examination and submit it to the Contractors State License Board with the required renewal or bond and fee.

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Introduction

Overview

The Contractors State License Board (CSLB) provides this asbestos-abatement informational booklet to all applicants when they pass their law and trade examinations. The applicant must read this booklet and complete the open book examination. The verification and answer sheet must be submitted to CSLB with your bond verification and license fee.

This booklet provides an overview of asbestos information. To fully understand your obligations, review the referenced regulations and contact the relevant agencies.

Goals

After reading this booklet you will be familiar with:

- what asbestos is
- the health hazards related to asbestos
- the basic laws and regulations regarding abatement of asbestos-containing materials
- what materials are suspected to contain asbestos
- who can remove asbestos-containing materials
- reporting requirements
- training requirements for all individuals who work with asbestos-containing materials
- what agencies to contact if more information is needed or desired
- methods for avoiding contact with asbestos-containing materials

Objectives

You will be aware of the risks of dealing with asbestos and you will have the knowledge base necessary to respond appropriately to construction situations where asbestos is or may be present.

Using the information provided in this booklet, you will demonstrate an understanding of the following:

- health issues associated with asbestos exposure
- diseases caused by exposure to asbestos
- how exposure to asbestos occurs
- how to prevent exposure to asbestos

Asbestos

Introduction

Asbestos is a naturally occurring mineral fiber that has been used extensively in construction and many other industries. Manufacturers have used asbestos in their commercial products because asbestos is noncombustible, noncorrosive, nonconductive, and it has high tensile strength. Asbestos fibers have been mixed with binding agents to create approximately 3600 different commercial products. The amount of asbestos contained in these products can vary from 1 to 100 percent.

Common Names for Asbestos

| WHITE ASBESTOS | BLUE or BROWN ASBESTOS |
|--|--|
| actinolite anthophyllite chrysotile (most common) tremolite | amosite (most common) crocidolite misorite |

Properties

Asbestos has several special properties that have led to its widespread use in the construction industry. Asbestos fibers have been added to materials to:

- fireproof
- insulate
- soundproof
- decorate

Examples of Uses in Construction

Tables 1 - 6 provide information regarding how asbestos-containing materials have been used in construction, the time periods in which they were used, and how asbestos fibers can be released into the air.

Table 1: Ceilings, Walls, and Insulation

| Location/Product | How Fibers are Released | Comments |
|---|---|--|
| Sprayed-on insulation (e.g., on ceilings, walls, and steelwork) <ul style="list-style-type: none"> • acoustical • thermal • fireproofing • decoration • condensation control | Water damage Deterioration Impact Vibration | In use from 1935 to 1973. EPA banned nearly all uses in 1973. |
| Insulation under/around heat sources such as stoves and fireplaces (e.g., asbestos containing cement sheets or paper) | Sanding Scraping Cutting Dry sweeping | |
| Patching or taping compound | Sanding Scraping Demolishing | In use from 1945 to 1977. CPSC banned use in 1977 but in 1980 many industrial joint-taping compounds still contained asbestos. |
| Some types of fireproof wallboard | Cutting Damage | |
| Insulation “sandwiched” between plaster walls and behind ceilings | Disturbances during renovation/demolition. If located in the air stream, fibers may be disturbed by the air flow, releasing fibers throughout the building. | |
| Electrical insulation | Damage, fraying or other deterioration | |
| Some textured paints (small amounts) | Sanding Scraping Cutting | |

Table 2: Pipe and Boiler Covering and Lagging

| Location/Product | How Fibers are Released | Comments |
|--|------------------------------------|--------------------------------------|
| Blocking | Damage Cutting Deterioration | In 1996, EPA banned these materials. |
| Pre-molded pipe covering sections | Damage Cutting Deterioration | In 1996, EPA banned these materials. |
| Corrugated asbestos paper (air cell) | Damage Cutting Deterioration | In 1996, EPA banned these materials. |
| Asbestos-paper tape on furnaces, steam valves, flanges | Damage Cutting Deterioration | In 1996, EPA banned these materials. |

Table 3: Flooring

| Location/Product | How Fibers are Released | Comments |
|-------------------------------|--|---|
| Vinyl tiles (binding agent) | Removal Sanding Dry-scraping Cutting Polishing | In use since 1950. |
| Asphalt tiles (binding agent) | Removal Sanding Dry-scraping Cutting Polishing | In use since 1920. |
| Vinyl sheet flooring backing | Removal Sanding Dry-scraping Cutting Polishing | In use between 1950 and 1990. EPA banned in 1990. |
| Flooring felt | Removal Sanding Dry-scraping Cutting Polishing | EPA banned in 1990. |

Table 4: Roofing and Siding

| Location/Product | How Fibers are Released | Comments |
|--|--|---------------------------|
| Roofing and siding (binding agent in portland cement) •shingles •sheets | Replacing Repairing Demolishing Cutting | |
| Roofing felts | Replacing Repairing Demolishing Cutting | In use since early 1900s. |

Table 5: Asbestos Cement Pipe

| Location/Product | How Fibers are Released | Comments |
|---------------------------------|------------------------------------|--------------------|
| Cement piping and pipe fittings | Demolishing Cutting Removing | In use since 1935. |

Table 6: Fireproof Textiles

| Location/Product | How Fibers are Released | Comments |
|--------------------|--|---------------------------|
| Fireproof cloth | Deterioration Damage Handling during renovation or removal | In use since early 1900s. |
| Fireproof blankets | Deterioration Damage Handling during renovation or removal | In use since early 1900s. |
| Fireproof curtains | Deterioration Damage Handling during renovation or removal | In use since early 1900s. |

Status of Asbestos-Containing Products

As of 1990, the Environmental Protection Agency's (EPA's) Asbestos Ban and Phase Out (ABPO) Rule has banned the manufacturing, processing, or importation of the following asbestos-containing products: corrugated paper, rollboard, commercial paper, and specialty paper.

A court decision determined the following asbestos-containing materials are no longer subject to the ABPO Rule: asbestos-cement corrugated sheet, asbestos-cement flat sheet, asbestos-cement shingle, asbestos-cement pipe, asbestos clothing, millboard, pipeline wrap, roofing felt, non-roofing coatings, roof coatings, and vinyl-asbestos floor tile. The court decision means the asbestos-containing materials no longer subject to the ABPO rule can be manufactured, processed, imported and used in the United States. **Be aware these asbestos-containing materials may be encountered in any renovation/remodel project regardless of the age of the facility. Any building could still contain these materials and should be surveyed prior to renovation/demolition project.**

Labeling of Asbestos-Containing Products

In 1986, the U.S. Consumer Protection Safety Commission (CPSC) required labeling of products containing asbestos. These products include:

- asbestos paper and millboard
- asbestos cement sheet
- dry-mix asbestos furnace or boiler cement
- central hot-air furnace duct connectors containing asbestos

The ABPO rule requires manufactures, processors or importers to label asbestos-containing material while the material remains in distribution. The EPA required labeling of flooring felt since August 27, 1990 for all stock on hand. The EPA requires labeling of commercial paper, corrugated paper, rollboard, and specialty paper.

Exposure to Asbestos

Is Asbestos Dangerous?

Inhalation of asbestos fibers can be deadly. Even short-term exposure to asbestos fibers can be harmful. For example, in documented cases, family members of asbestos workers have contracted disease from exposure to asbestos fibers on the workers' clothing. Authorities believe there is no safe level of exposure, and many experts believe the more you are exposed to asbestos, the higher the risk of contracting an asbestos-related disease.

Who Might be Exposed to Asbestos?

Construction jobs in renovation, demolition, and construction may result in exposure to asbestos, either directly or indirectly (i.e., as a result of the activity of nearby workers in other trades). The list below displays some of the construction-related workers who may be exposed to asbestos on the job:

| | |
|--------------------------------------|----------------------|
| Bricklayers | Janitorial workers |
| Carpenters | Laborers |
| Cement masons | Operating engineers |
| Demolition contractors | Painters/decorators |
| Drywall tapers | Plasterers |
| Electricians | Plumbers |
| Floor coverers | Roofers |
| General building maintenance workers | Sheet metal workers |
| Glaziers | Sprinkler fitters |
| Heat and frost insulators | Stationary engineers |
| Heating/air-conditioning workers | Steamfitters |
| Home improvement contractors | Welders |

How Does Exposure to Asbestos Occur?

Exposure to asbestos occurs when asbestos fibers are released into the air. The typical size of an asbestos fiber is so small that you cannot see the fiber with the naked eye. In fact, asbestos fibers are so small they pass through normal vacuum cleaner filters and get back into the air. The asbestos fibers are so light that they can stay airborne for many hours. These properties increase the extent of asbestos exposure for individuals within the affected area.

Asbestos-containing material is called friable if it can be crumbled by hand pressure or impact, causing the asbestos fibers to become airborne. The asbestos fibers can be inhaled and embedded in the lungs. Your body has no natural mechanism to remove these fibers.

Levels of Exposure

To protect workers handling asbestos-containing materials, the Federal OSHA established two levels of exposure: permissible exposure limit (PEL) and the excursion limit.

Permissible exposure limit (PEL) - defined as 0.1 fibers per cubic centimeter of air (f/cc) averaged over an eight-hour day.

Classes of Work

Excursion limit - defined as 1.0 fibers per cubic centimeter of air (f/cc) averaged over a sampling period of 30 minutes.

Cal/OSHA classifies asbestos abatement work into four categories or classes (I, II, III, IV). Contractors should know which class of work pertains to their project.

There are different abatement requirements for each class. The following must be addressed:

- warning signs
- regulated work areas
- personnel training
- personal protective equipment
- prohibited behaviors (e.g., smoking, eating, drinking)
- air monitoring
- disposal

Record Keeping- Complete and accurate records of the project's completion in accordance with Cal/OSHA and EPA guidelines must be kept and maintained for at least 30 years. These records must be made available to employees and former employees upon their request.

Asbestos and Your Health

Types of Diseases

A worker can either inhale or ingest airborne asbestos fibers. Once inhaled or ingested, asbestos fibers can easily penetrate body tissues. Exposure to asbestos may cause several serious diseases.

Asbestosis - a serious, chronic, non-cancerous respiratory disease, which occurs when asbestos fibers become lodged in the lungs. The lung tissues become irritated and the small air tubes and sacs in the lungs become inflamed. As the inflammation heals, permanent scar tissue (called fibrosis) remains.

Early Symptoms - shortness of breath, coughing, and fatigue.

Treatment - there is no effective treatment for this condition.

Prognosis - disabling or fatal.

Lung Cancer - five times more common in people exposed to asbestos than in individuals who have not been exposed. Smoking greatly increases this risk. A smoker who is heavily exposed to asbestos is 30 to 90 times or more likely to develop lung cancer than a non-smoker.

Early Symptoms - coughing, changes in breathing, shortness of breath, chest pains, hoarseness, and anemia.

Treatment - there is no cure, however, if diagnosed early, medical treatment is available.

Prognosis - disabling or fatal.

Mesothelioma - a rare and deadly form of cancer that may occur from relatively light exposure to asbestos. This cancer involves the lining of the chest and abdomen.

Early Symptoms - shortness of breath, chest or abdominal pain.

Treatment - there is no effective treatment for this condition.

Prognosis - fatal.

Other Cancers - Exposure to asbestos is also thought to result in cancers of the esophagus, larynx, stomach, colon, rectum, and gastrointestinal tract. These diseases may be due to ingesting some asbestos fibers that are caught in the upper air passages and then carried to the throat in mucous.

Treatment - there is no cure, however, if diagnosed early, medical treatment is available.

Individuals who contract an asbestos-related disease often do not show symptoms for 10 to 30 years after exposure. As such, if work exposes you to asbestos, regular medical exams are crucial to the early detection of asbestos-related diseases.

Medical Examinations

Workers who are frequently exposed to asbestos should receive medical examinations on a regular basis. All asbestos abatement workers should be given a full physical when hired and annually thereafter. These medical exams should include the following tests:

- complete medical and work history (specifically symptoms of the respiratory systems, cardiovascular systems, and digestive tract)
- chest x-ray
- pulmonary function test
- any lab or other tests the doctor deems necessary (e.g., stool sample)

Risk Factors

The amount of asbestos exposure, the length of exposure, and number of exposures all seem to influence the likelihood of developing asbestos-related disease. The greater your total exposure to asbestos the greater chance you will become ill. In addition, (as mentioned previously) smoking greatly increases one's chances of contracting an asbestos-related disease.

The National Institute for Occupational Safety and Health (NIOSH) estimates that persons exposed to asbestos may have five times the chance of developing the diseases described in this booklet. Reduce this risk by taking the necessary precautions to limit your exposure to asbestos as much as possible.

Asbestos-Related Work

Introduction

As a contractor, you are required to be aware of the presence of asbestos on a job. The owner, employer, or contractor must determine whether asbestos is present before work begins on a project. The employer or contractor must assume that asbestos is present in any building or structure built before 1980 unless the owner can produce proof that materials are asbestos-free. The owner's response should be documented. During the pre-job safety conference, the asbestos contractor must provide a copy of his/her Cal/OSHA registration to the prime/general contractor and any other employers at the site before the commencement of any asbestos-related work. The asbestos contractor and other contractors on site should ensure that all individuals on site are aware of asbestos abatement activities. Your health, your employees' health, and your protection from liability all depend on your awareness of the presence of asbestos on a job.

The California Labor code defines *Asbestos-related work* as "any activity which by disturbing asbestos-containing construction materials may release asbestos fibers into the air." The Labor code further defines *Asbestos-containing construction materials* as "any manufactured construction material that contains more than one-tenth of 1 percent (.1%) asbestos by weight." As suggested by this definition, exposure to asbestos can occur from a number of construction-related operations. For example:

- While remodeling a home to add a stairway, a contractor who cuts through a ceiling section may encounter sprayed-on asbestos insulation.
- While replacing pipes during a minor renovation, a plumber may be exposed to deteriorated, asbestos-containing pipe covering.
- Insulation contractors may be exposed to asbestos fibers when cutting through asbestos shingle siding to insulate a wall.

Asbestos Abatement Certification and DOSH Registration

A contractor must be certified and registered with Cal/OSHA (i.e., DOSH registered) for any work that involves 100 square feet or more surface area of asbestos-containing construction materials. Certified contractors must pass a more comprehensive Asbestos Certification Examination administered by the CSLB and must register with the Asbestos Contractor Registration Unit of the Division of Occupational Safety and Health (DOSH). Applications for DOSH registration must include the following documentation:

- certification by CSLB for asbestos abatement work
- health insurance coverage (or a \$500 trust account for each employee)
- workers' compensation insurance
- evidence that all employees are trained and certified as required by state and federal regulations
- methods and policies for providing a safe place of employment
- that the contractor has the necessary equipment to safely perform asbestos-related work

No contractor may engage in asbestos-related work of 100 square feet or more if they have not passed the certification examination and registered with DOSH. The penalties are stiff if a contractor performs asbestos-related work of 100 square feet or more without CSLB certification and DOSH registration.

Exceptions

A contractor does not have to be certified or DOSH registered to install, maintain, repair, and remove less than 100 square feet of the following materials in a non-friable state:

- asbestos pipe
- sheet asbestos goods
- vinyl asbestos floor
- asphalt saturated roofing

Uncertified Contractors

If these materials become friable during installation, maintenance, or repair, or if more than 100 square feet of materials are involved in the project, a CSLB certified, DOSH registered contractor must perform the abatement

If the removal of asbestos-containing materials involves less than 100 square feet of surface area, CSLB does not require certification as an asbestos abatement contractor and DOSH does not require registration. However, you are still doing asbestos-related work and you must file a *CARCINOGEN 'REPORT OF USE' FORM* with the Occupational Carcinogen Control Unit of DOSH **and** you (and anyone else on your crew who will be involved in the project) must also complete 40 hours of asbestos training. This training must be provided by a DOSH approved asbestos trainer. In addition, you must follow the OSHA worker protection rules (Title 8, § 8CCR1529).

Bids - an uncertified contractor may **BID** on a project involving asbestos-related work in excess of 100 square feet of surface area **IF** the asbestos-related work is subcontracted to a contractor who is properly certified by CSLB and registered by DOSH. For a list of contractors registered to perform asbestos-abatement work, contact the Asbestos Contractor Registration Unit (ACRU) at (415) 703-5191 or the website www.dir.ca.gov.

Fines and penalties - a contractor who engages in asbestos-abatement work of 100 square feet or more surface area of asbestos-containing materials without certification and registration shall be subject to one of the following fines and penalties by CSLB:

- For a conviction of the first offense, the fine should be not less than one thousand dollars (\$1,000) or more than three thousand dollars (\$3,000), and penalties may include possible revocation or suspension of any contractor's license.
- For the conviction of a subsequent offense, the fines should be not less than three thousand dollars (\$3,000) or more than five thousand dollars (\$5,000), or possible imprisonment in county jail for up to one year, or both fine and imprisonment, plus mandatory action to suspend or revoke the contractor's license. Criminal penalties may be imposed if the violation is "knowing and intentional."

Note: Other agencies (e.g., federal, state, or local) may have additional fines and penalties for violations during asbestos abatement.

Accreditation for Public & Private Schools

Asbestos Hazard Emergency Response Act (AHERA) Title II of the Toxic Substance Control Act (TSCA), requires local education agencies to use accredited persons to perform the following asbestos-related tasks:

- Inspect for asbestos-containing materials in school buildings.
- Prepare management plans concerning the presence of asbestos-containing materials in schools.
- Design and draft specifications for asbestos abatement projects.
- Supervise and conduct the abatement work.

Personnel involved in asbestos-related work in private and public schools (grades K through 12) must attend and pass a DOSH training course. Approved trainers and courses can be located at the following website: <http://www.dir.ca.gov/databases/doshcaccsst/aheratp.asp> The EPA has separate accreditation courses for inspectors, management planners, project designers, asbestos abatement contractors and supervisors, and for asbestos abatement workers. You are only allowed to work in your accredited areas.

Fines and penalties - Abatement work in schools must be done by persons trained in EPA-accredited courses. Persons who violate these regulations are subject to a fine and criminal penalties may also be assessed if the violation is knowing and intentional. Contractors who improperly remove asbestos from schools can be liable under both AHERA and National Emissions Standards for Hazardous Air Pollutants (NESHAP).

NESHAP Regulations

The Clean Air Act (CAA) of 1970 required the EPA to develop and enforce regulations to protect the general public from exposure to hazardous air pollutants. The EPA established NESHAP regulations to protect the public from these air pollutants. Because of its inherent health risks, asbestos was one of the first hazardous air pollutants regulated. Personnel involved in asbestos-related work in facilities under NESHAP jurisdiction must also attend and pass a DOSH training course.

NESHAP notification requirement – Any demolition project should proceed no less than 10 working days after the EPA or delegated air pollution authority has been notified of the planned demolition. This notice is required even though there is no asbestos or the asbestos has been removed. NESHAP defines demolition as “the removal of any weight-bearing member.”

Work practices to follow under NESHAP - the following work practices should be adhered to for demolition or renovation of any structures, installations, and buildings, except residential buildings that have four or fewer dwelling units, involving asbestos-containing material:

- Notify EPA to get information regarding survey requirements and to express intentions to demolish or renovate
- Remove all asbestos-containing material from the facility being demolished or renovated **before** any disruptive activity begins or before access to the material is obstructed
- Keep asbestos-containing material adequately wet before, during, and after removal
- Conduct demolition or renovation activities in a manner which produces no visible emissions to the outside air
- Handle and dispose of all asbestos-containing material by placing in leak-tight containers with warning labels and transport to a state approved waste disposal site.

****It should be noted that these rules are in addition to Cal/OSHA regulations and any local AQMD restrictions****

Fines and penalties - a contractor who engages in asbestos-abatement work in a facility under NESHAP jurisdiction without certification or in violation of NESHAP work practice standards is subject to the following fines and penalties:

- The fines assessed can be up to \$25,000 per day per violation.
- The contractor can have criminal charges filed for a “knowing” violation of the law with the penalty of imprisonment.

Comparison of NESHAP to Cal/OSHA and CSLB - Table 7 provides a comparison of the practice standards for Cal/OSHA, NESHAP and CSLB. Notice that Cal/OSHA’s standards are the most rigorous. However, the penalties are most strict for violations of NESHAP standards.

Table 7: Comparison of NESHAP to Cal/OSHA and CSLB Regulations

| | NESHAP practice standards | Cal/OSHA practice standards | CSLB/ Contractors License Law |
|---|--|---|---|
| Asbestos-Containing Material | More than 1% | 1% | Surface area: 100 square feet or more |
| Facility | demolition or renovation of all structures, installations, and buildings, excluding residential buildings that have four or fewer dwelling units | all structures and buildings including all residential buildings | any structure, excavation site, or railroad in California where the total cost (labor and materials) of one or more contracts on the project is \$500 or more |
| Removal of Asbestos-Containing Material | Surface area: 160 square feet or more Pipe: 260 linear feet | Class of work trigger—any amount can trigger some work practice rules | Surface area: 100 square feet or more |
| Monitoring of Air | none | PEL and excursion limit | none |
| Adequately Wet | no visible dust | visibly wet (as determined by Cal/OSHA inspector) | none |
| Fines and Penalties | civil penalties: up to \$25,000 per day per violation criminal penalties: prison terms for a knowing violation | first: up to \$3,000 fine, or both fine and revocation or suspension of license subsequent: up to \$5,000 fine, imprisonment, or both fine and imprisonment, and revocation of license | first: misdemeanor charges filed subsequent: 20 percent of the price of the contract under which violation occurred or \$4,500 (whichever is greater) or imprisonment in the county jail for not less than 10 days or more than 6 months or both |

Governing Laws

These laws are designed to protect the health of the contractor, the employees, and the public who might be exposed to asbestos fibers by someone who is not trained or equipped for proper asbestos abatement.

The legal sections related to asbestos are listed below. For the most up to date information on the law, contact the appropriate agency listed in the Resource section of this booklet.

California laws governing contractors who work with asbestos - Tables 8 - 11 display the section and topic of California laws that pertain to asbestos-related work.

Table 8: *Business and Professions Code, Contractors License Law*

| Section | Topic |
|---------|---|
| 7028.1 | Fines and penalties for performing asbestos-related work by uncertified contractor |
| 7058.5 | Outlines when asbestos certification is needed; Requires all contractors to complete open book examination on asbestos-related work |
| 7058.6 | Registration of asbestos contractor with Division of Occupational Safety and Health (DOSH) |
| 7058.8 | CSLB shall provide to public request of current list of certified and registered asbestos contractors |
| 7099.11 | Penalties and fines for contractors who falsely or incorrectly advertise asbestos-related work |
| 7118.5 | Penalties and fines for contracting with an uncertified contractor for asbestos-related work |
| 7180 | Asbestos consultants and site surveillance technicians shall be certified by DOSH |
| 7181 | Defines scope of work practice for asbestos consultant: Inspections, abatement project design, contract administration, supervisor of site surveillance technicians, sample collections, preparation of asbestos management plans, and clearance air monitoring |

Table 8 continued

| Section | Topic |
|---------|--|
| 7182 | Defines scope of practice for site surveillance technician: Independent on-site representative of asbestos consultant, provides air monitoring services for area and personnel, at the directions of the asbestos consultant performs building surveys and contract administration |
| 7183 | Sets time limits for DOSH to accept or reject applications for asbestos consultant or site surveillance technicians |
| 7183.5 | DOSH enforces and revokes certification for asbestos consultant or site surveillance technician |
| 7184 | Asbestos consultant requirements for certification |
| 7185 | Site surveillance technician requirements for certification |
| 7187 | Asbestos consultant or site surveillance technician conflicts of interest with asbestos abatement contractor |
| 7189 | Penalties for uncertified practice as an asbestos consultant or site surveillance technician |
| 7189.5 | Defines asbestos abatement projects as 100 square feet or more surface area of asbestos-containing material |
| 7189.7 | Allows certified state employees to perform asbestos consultant or site surveillance technician work for the site |

Table 9: *Division 5, Labor Code*

| Section | Topic |
|---------|---|
| 6325.5 | If work place contains friable asbestos and protection for employees is inadequate DOSH may stop work |
| 6436 | Who may bring a complaint for asbestos violations; disposition of penalties |
| 6501.5 | Registration requirements for asbestos-related work contractors |
| 6501.7 | Defines asbestos |
| 6501.8 | Defines asbestos-related work, asbestos-containing construction materials, Exceptions |
| 6501.9 | Duty to determine presence of asbestos before beginning construction work |
| 6503.5 | Guidelines for safety conference when handling asbestos |
| 6505.5 | Penalties for failure to determine presence of asbestos |
| 6508.5 | All public entities involved in asbestos-related work must register with DOSH |
| 6509.5 | Defines conflict of interest with inspecting contractor and contractor performing asbestos-related work as a condition for loan, permit, etc.; includes penalties and fines |
| 9004 | Identifies asbestos as a carcinogen |
| 9021.5 | Establishes asbestos consultants and site surveillance technicians shall be certified by DOSH |
| 9021.6 | Gives DOSH permission to charge fee for certification renewal of asbestos consultant and site surveillance technician |
| 9021.7 | Creates accounts for asbestos training program and asbestos consultant certification fees |
| 9021.8 | Establishes requirements for annual renewal of asbestos consultant and site surveillance technician certification |
| 9021.9 | Establishes content for task specific training program for employees and supervisors |
| 9040 | Employer's duty to provide regular medical exam for employees |

Table 10: *Health and Safety Code*

| Section | Topic |
|---------|---|
| 19827.5 | Local agencies may not issue permits to demolish until the applicant has demonstrated exemption from or compliance with notification requirements of NESHAP |
| 25914.2 | Guidelines for contracts regarding asbestos-related work; Continuance of work in unaffected areas; Emergency conditions |
| 25914.3 | Provision for uncertified contractor to bid on a project involving asbestos-related work |
| 25143.7 | Guidelines for disposal of asbestos at landfill sites |

Table 11: *California Code of Regulations, Title 8*

| Section | Topic |
|---------------|--|
| 341.6 | Establishes DOSH asbestos-related work registration requirement for work of 100 square feet or more surface area of asbestos-containing material |
| 341.7 | Outlines DOSH requirements for registration to perform asbestos-related work |
| 341.9 | Establishes DOSH notification requirements to perform asbestos-related work |
| 341.10 | Establishes guidelines for postings and notification s related to asbestos work |
| 341.11 | Establishes procedures for safety conference before starting asbestos-related work |
| 341.13-341.14 | Outlines conditions under which a license/DOSH registration will be revoked or denied |
| 1529 | Establishes procedures and guidelines for asbestos-related work |
| 5208 | Establishes procedures for asbestos-related work for non-construction trades; exception: spraying |

Guidelines for Handling Asbestos

Introduction

The following discussion is intended to provide **general information** about proper work practices. **If you will be working with asbestos you should obtain further information, training, and certification. THERE IS MORE TO KNOW ABOUT ASBESTOS-RELATED WORK THAN CAN BE COVERED IN THIS BOOKLET!** Contact your trade association, insurance company, Cal/OSHA, Federal OSHA, and the EPA for further information.

Identifying Asbestos

While it is possible to “suspect” that a material contains asbestos by visual inspection, actual determinations can only be made by laboratory analysis. Stop work in the area immediately. It is required that a certified industrial hygienist, asbestos consultant certified by Cal/OSHA, or contractor who has completed AHERA inspector training sample any PACM (presumed asbestos-containing material). If the results of the sampling reveal the presence of asbestos, a certified industrial hygienist, asbestos consultant trained by Cal/OSHA or contractor who has completed AHERA inspector training must monitor the air to determine the concentration of asbestos fibers in the air.

Until the material is tested, you should assume that the product contains asbestos unless the label or the manufacturer verifies that it does not. The EPA requires that the asbestos content of suspect material be determined by collecting bulk samples and analyzing the samples by polarized light microscopy (PLM). The PLM technique determines both the percentage and type of asbestos in the sampled material. Contact a regulatory agency such as Federal OSHA or Cal/OSHA for a list of testing laboratories.

Building records may indicate the presence of asbestos on a site, but these records are often inaccurate and should not be used as a substitute for professional advice. However schools are required to identify the location of all building and construction material that contain asbestos and they must make this information available to the public.

Determining the presence of asbestos - the owner, employer, or contractor must determine whether asbestos is present before work begins on a project. The employer or contractor must first ask the owner whether asbestos is present in any building or structure built before 1980. The response should be documented.

Fines and Penalties - According to the Labor Code beginning asbestos-related work without first determining if asbestos-containing material is present may make you subject to one of the following penalties taken from Section 6505.5 of the Labor Code:

- For a knowing or negligent violation, a fine of not more than \$5,000 or imprisonment in the county jail for not more than six months, or both the fine and imprisonment.
- For a willful violation which results in death, serious injury or illness, or serious exposure, a fine of not more than \$10,000 or imprisonment in the county jail for not more than one year, or both the fine and imprisonment. A subsequent willful violation may be punishable by a fine of not more than \$20,000 or by imprisonment in the county jail for not more than one year, or both the fine and imprisonment.
- A civil penalty of not more than \$2,000 for each violation.
- For willful or repeat violation, a civil penalty of not more than \$20,000 for each violation.

Asbestos standard for the construction industry - most workers and contractors in California fall under the jurisdiction of the Federal OSHA Standard, Asbestos Standard for the Construction Industry, and Title 8 of the California Code of Regulations, section 1529. These standards describe the state of the art methods used to sample, test, or remove asbestos-containing materials. Finally, these standards explain the documentation procedures necessary when working with asbestos-containing materials. **Even if you are working with less than 100 square feet of surface area of asbestos-containing material, you must still follow the provisions of the asbestos standard for the construction industry.**

Asbestos- Abatement Work

Asbestos-abatement work includes encapsulating, enclosing, and removing asbestos at a site. Workers performing this work may have high potential for exposure to asbestos fibers. Removing asbestos is the only permanent solution to its dangers. However, the EPA recommends if the asbestos is intact, enclosing or encapsulating asbestos on site together with periodic monitoring, may be the best course of action. Improper removal of asbestos-containing material can create a dangerous situation where little or no risk previously existed.

A safety conference must be held before the start of work on all asbestos-handling jobs. The conference must include:

- representatives of the owner of the contracting agency
- the employer
- the employees
- employee representatives.

Such a conference must include a discussion of the employer's safety program and safe work practices to be followed.

Summary

As mentioned previously, you must make every attempt to find out if asbestos is present on a site before beginning work. Otherwise, you run the risk of criminal prosecution if asbestos-related work is done without proper CSLB certification and DOSH registration. By not obtaining necessary certification and registration and by not following proper abatement procedures, you may also be in violation of laws that regulate asbestos exposure and may run the risk of lawsuits from employees who have been illegally exposed.

Note that Federal OSHA regulations require a pre-job site assessment for general health and safety hazards, including asbestos. It is in your best interest to document this assessment and any other efforts to determine the presence of asbestos before work begins.

If you discover asbestos in the middle of a project, you must stop work in the area immediately! Contact your nearest DOSH district office and EPA for assistance. It may be advisable for you to obtain the services of an industrial hygienist or asbestos consultant to determine the best way to deal with your asbestos problems. It is highly recommended that an industrial hygienist or asbestos consultant certified by Cal/OSHA sample any PACM (presumed asbestos-containing material).

If the presence of asbestos is confirmed, steps must be taken to abate the hazard. Remember that no one may do abatement or other asbestos-related work of 100 square feet or more without special certification and registration. Further, **even in cases where there is less than 100 square feet of asbestos to be removed, DOSH training and reporting is still required!** As such, it may be necessary (and most advisable) to subcontract the work to a certified and registered licensed contractor.

If you employ people to work on a site where asbestos is present, it is your responsibility to inform your employees about asbestos risks, proper work practices, and control measures. By fulfilling your responsibility, you protect everyone's health and you also protect yourself against liability.

There are several federal and state laws and regulations that specify requirements for employee training and education. The Federal OSHA Construction Industry Standards state that an employer must have a training program for all employees exposed to Class II and Class III materials/airborne concentrations of asbestos that exceed the PEL. Title 8, sections 1529 and 5208 of the California Code of Regulations also require a training program for all employees exposed to Class II and Class III materials/airborne concentrations of asbestos that exceed the PEL. For asbestos abatement work in school buildings, all workers and supervisors must take and pass an EPA-accredited course.

Employees who are performing Class II and Class III work/PEL limits may be exceeded must be given a training program that includes most of the information in this booklet. Contact Federal OSHA and DOSH for information regarding what must be covered in such a program.

All employers and contractors have certain responsibilities regarding the training of employees and the provision of health coverage. Title 8, sections 1529 and 5208 of the California Code of Regulations outline the certification and training requirements when performing asbestos-related work. The regulation also includes specific requirements for certifying supervisors to oversee work on 100 square feet or more of asbestos-containing material. It also requires that a qualified person be responsible for sampling and analyzing air and testing respirator fits. Finally, it provides specific requirements for certification of employees.

Reporting Incidents of Exposure

DOSH requires that any employee exposed to asbestos above the PEL be notified of the fact by the employer within five days of the discovery that the exposure has occurred. A report must also be made to the nearest DOSH district office within 15 days of the known exposure of an employee to levels of asbestos that exceed the PEL. Cal/OSHA requires that employees must be notified in writing as soon as possible of the results of monitoring, either individually or by posting in an accessible place.

Contract Protection

To protect against the costs and damages associated with delay if asbestos is discovered after work is already in progress, the contractor should include a “changes and extras” clause in any contract for repair and renovation of existing facilities. Such a clause should notify owners of their obligation to determine if the structure contains asbestos. The clause should provide for increased compensation and an increase in time for completion if physical conditions at the site are different from those described in the plans and specifications. **Any new conditions, such as asbestos discovered mid project, would then trigger a “claim” or “extra” negotiation between the contractor and the owner.** Without such a clause, the contractor should increase the initial bid to cover unforeseen hazards or additional work that may only be discovered once work begins; **otherwise the contractor runs the risk of paying for any such additional work.**

Resources

Environmental Protection Agency

| | | |
|-------------------------------|----------------|--|
| EPA Public Information Center | (415) 947-8000 | www.epa.gov/region9 |
|-------------------------------|----------------|--|

Cal/OSHA

| | | |
|---|----------------|--|
| Division of Occupational Safety and Health (DOSH) | (415) 703-5100 | www.dir.ca.gov |
| DOSH - Asbestos Contractors Registration Unit | (415) 703-5191 | www.dir.ca.gov |
| DOSH - Occupational Carcinogens Control Unit | (415) 703-5191 | www.dir.ca.gov |

Contacts for Lists of Qualified Help in Asbestos-Related Work

| | | |
|---|----------------|--|
| American Industrial Hygiene Association | (703) 849-8888 | www.aiha.org |
| National Institute for Standards and Technology | (301) 975-4016 | www.nist.gov/nvlap |
| National Institute for Occupational Safety and Health (NIOSH) | (800) 356-4674 | www.cdc.gov/NIOSH |
| Asbestos Consultant Certification Unit | (916) 574-2993 | www.dir.ca.gov |
| Contractors State License Board (CSLB) | (800) 321-2752 | www.cslb.ca.gov |

Additional Training

| | | |
|---|----------------|--|
| EPA | (415) 947-8000 | www.epa.gov/region9 |
| State Building & Construction Trade Council of California | (916) 443-3302 | www.sbctc.org |
| Cal/OSHA website listing all certified training providers | | www.dir.ca.gov/databases/doshcaccsst/aheratp.asp |

Health Issues

| | | |
|--|----------------|--|
| American Lung Association | (800) LUNG-USA | www.lungusa.org |
| The US Consumer Products Safety Commission | (800) 638-2772 | www.cpsc.gov |

Disposal Procedures

| | | |
|---|----------------|--|
| Water Resources Control Board | (916) 653-5791 | www.water.ca.gov |
| Integrated Waste Management Board | (916) 341-6000 | www.ciwmb.ca.gov |
| Department of Toxic Substances Control-Waste Manifest | (916) 324-1826 | www.dtsc.ca.gov |

Miscellaneous

| | | |
|-------------------------------------|--------------------------|--|
| Toxic Substances Control Act | (202) 554-1404 | www.epa.gov |
| Consumer Products Safety Commission | (800) 638-2772, ext. 300 | www.cpsc.gov |

Asbestos Open Book Exam

1. According to Cal/OSHA regulations, in cases where there is **less** than 100 square feet of asbestos material, which of the following requirements must an uncertified contractor complete before performing any asbestos-related work?
 - a. CSLB certification and DOSH registration
 - b. DOSH notification and Cal/OSHA training
 - c. Cal/OSHA training and DOSH registration
 - d. CSLB certification and Cal/OSHA training
2. Before performing abatement that involves **more** than 100 square feet, what must a contractor have?
 - a. CSLB certification and DOSH registration
 - b. DOSH certification and a completed EPA notification
 - c. EPA certification and a completed CSLB notification
 - d. EPA registration and a completed NIOSH notification
3. How many years will it usually take before asbestos-related disease will appear?
 - a. 1 - 5 years
 - b. 6 - 11 years
 - c. 10 - 30 years
 - d. 40 - 50 years

4. Before work begins on a job, a contractor must ask the owner whether asbestos is present in any building constructed before what year?
 - a. 1968
 - b. 1980
 - c. 1982
 - d. 1986
5. Which of the following asbestos products is most easily damaged by vibration and impact?
 - a. Roofing shingles
 - b. Floor tile
 - c. Pre-molded pipe coverings
 - d. Sprayed-on acoustical
6. What agencies does the contractor have to notify if performing a demolition job on a building?
 - a. NESHAP (EPA)
 - b. DOSH
 - c. CSLB
 - d. DHS

7. If a smoker and a non-smoker are both heavily exposed to asbestos, how much more likely is the smoker compared to the non-smoker to develop lung cancer?
- a. 20 to 40 times more likely
 - b. 30 to 90 times more likely
 - c. 15 to 30 times more likely
 - d. 10 to 15 times more likely
8. Which of the following rare and deadly cancers may occur from relatively light exposure to asbestos?
- a. Asbestosis
 - b. Lung cancer
 - c. Stomach cancer
 - d. Mesothelioma
9. An uncertified contractor who is cited by CSLB for engaging in asbestos-related work of more than 100 square feet may receive which of the following fines for the first offense?
- a. \$1,000 to \$3,000
 - b. \$3,000 to \$5,000
 - c. \$10,000 to \$20,000 for each violation
 - d. \$25,000 per day per violation

10. If removing less than 100 square feet of asbestos-containing materials on a job, what agency does the contractor need to notify?
- a. DOSH District Enforcement Office
 - b. Local Air Quality District
 - c. NESHAP (EPA)
 - d. CSLB
11. Which of the following is the preferred method for dealing with an asbestos-related problem?
- a. Removal
 - b. Enclosure
 - c. Encapsulation
 - d. Encasing
12. Which of the following agencies have regulations that are often more strict than Cal/OSHA regulations?
- a. EPA
 - b. CSLB
 - c. Local Air Quality District
 - d. Department of Occupational Safety and Health

13. The preferred method for abating asbestos-containing materials is encasement.
- TRUE
- FALSE
14. The asbestos contractor must provide a copy of his/her Cal/OSHA registration to the prime/general contractor and any other employers at the site before the commencement of any asbestos-related work.
- TRUE
- FALSE
15. Asbestosis is a serious, chronic, non-cancerous respiratory disease that occurs when asbestos fibers become lodged in the lungs.
- TRUE
- FALSE
16. Exposure to asbestos is thought to result in cancers of the esophagus, larynx, stomach, colon, rectum, and gastrointestinal tract.
- TRUE
- FALSE
17. EPA has banned all asbestos-containing products since 1990.
- TRUE
- FALSE

18. Friable asbestos-containing material should be handled as hazardous material.
- TRUE
- FALSE
19. Contractors cited for violations by EPA can be assessed for civil penalties of up to \$25,000 per day per violation
- TRUE
- FALSE
20. Asbestos-containing material enclosed in a labeled air tight bag can be disposed of in a public dumpster.
- TRUE
- FALSE

Verification Form

IMPORTANT:

1. Complete the open book examination, using the answer sheet on the other side of this page.
2. Sign this page as noted.
3. Tear out this page and submit it with your bond and fee notice

I understand that the Open Book Examination is required to be completed and submitted with my bond and fee. **I further understand that this Open Book Examination does *NOT* certify me to engage in asbestos-related work pursuant to section 7058.5 of the Business and Professions Code.**

Applicant/Licensee

Signature

(Signature of owner, partner, or officer)

Print

Applicant/Licensee

Name

Qualifier's

Signature

(Signature of RME/RMO or Qualifying Partner)

Print

Qualifier's

Name

Qualifier's

Signature

(Signature of RME/RMO for additional classifications)

Print

Qualifier's

Name

Answer Sheet

Circle the letter that corresponds to the choice that best completes questions 1 through 12.

- | | | | | |
|-----|---|---|---|---|
| 1. | a | b | c | d |
| 2. | a | b | c | d |
| 3. | a | b | c | d |
| 4. | a | b | c | d |
| 5. | a | b | c | d |
| 6. | a | b | c | d |
| 7. | a | b | c | d |
| 8. | a | b | c | d |
| 9. | a | b | c | d |
| 10. | a | b | c | d |
| 11. | a | b | c | d |
| 12. | a | b | c | d |

Circle T (true) or F (false) for questions 13 through 20.

- | | | |
|-----|---|---|
| 13. | T | F |
| 14. | T | F |
| 15. | T | F |
| 16. | T | F |
| 17. | T | F |
| 18. | T | F |
| 19. | T | F |
| 20. | T | F |

ANSWERS

This page is intentionally blank

1. b
2. a
3. c
4. b
5. d
6. a
7. b
8. d
9. a
10. a
11. a
12. c
13. F
14. T
15. T
16. T
17. F
18. T
19. T
20. F